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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,002	08/21/2001	Satoshi Seo	SEL 272	7710

7590 11/21/2002

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EXAMINER

GARRETT, DAWN L

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,002

Applicant(s)

SEO, SATOSHI

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,7,8 and 14 is/are allowed.
- 6) ☒ Claim(s) 2-6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3, 4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because "Chemical Formula 4" contains a handwritten correction. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-5 and 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 2 contains the phrase "unsaturated-chain-**type** substituent". The word "type", when appended to an otherwise definite term, may render said term indefinite (see *Ex parte Attig*, 7 USPQ 2d 1092 (BPAI 1988); *Ex parte Copenhaver*, 109 USPQ 118 (PO BdPatApp 1955)). Correction is required.

5. Claims 3-5 state the phrase "layer is added with...." It is unclear if the materials added to the layer are part of the transporting layers or if the materials are added at a later time. If the material is added after the layer is already formed, it is unclear how the

material would be added. The examiner has interpreted claims 4 and 5 to mean electron transporting material and at least of alkali metal, alkaline earth metal, and transition metal is required to comprise the electron transporting layer in claim 4. In claims 3 and 5, the claims are interpreted such that hole transporting material and at least one of a compound comprising bromine or iodine or a compound with a transition metal is required in the hole transporting layer. Clarification with regard to the composition of the layers is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 6 and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Takahashi et al. (JP 2000-150146). Takahashi et al. disclose an organic EL element including a luminescent layer between electrodes. The organic layer is preferably an electron transporting layer, per instant claim 6, and is a polymerized layer of a phthalocyanine compound formed by an ion plating method (see JPO English abstract). See Figures 1, 4, and 8 for an electronic device per instant claim 13. Takahashi discloses all components required by instant claims 6 and 13.

Allowable Subject Matter

8. Claims 1, 7, 8, and 14 are allowed. Claims 2-5 and 9-12, as interpreted by the examiner, contain allowable subject matter, but are currently rejected under 35 USC 112, second paragraph.

The closest prior art is considered to be Naito, which discloses an organic thin film element comprising an organometallic compound (see English abstract and Japanese patent page 6 following line 25). Naito discloses the organic film containing elements are used in various functional devices (see JPO machine translation paragraphs [0001] and [0006]) and Example 9 teaches an organic light storage element (see paragraph [0044]). Naito fails to teach or to render obvious the very specific elements of the instant claims.

The polymeric formulas of instant claims 1 and 2 have not been found in the prior art. Please note that claim 2 is rejected at this time under 35 USC 112, second paragraph, as previously discussed in this Office action.

The prior art also fails to teach or to render obvious an organic EL element wherein a hole transporting material is added to a compound comprising bromine, iodine or transition metal per instant claims 3 and 5. Also, the prior art fails to teach or to render obvious an organic EL element wherein an electron transporting layer is added to an alkali metal, alkaline earth metal, or transition metal per instant claims 4 and 5. It is noted that claims 3 –5 are rejected under 35 USC 112, second paragraph, as discussed previously in this Office action.

The prior art fails to teach or to render obvious an organic EL element according to claim 7 or an electronic device comprising such an element per instant claim 14 comprising an ion implanted hole transporting layer.

Conclusion

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (703) 305-0788. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached at (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

D.G.
November 14, 2002

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

